Appendix B:

Literature Review

Introduction

The goal of the literature review is to offer a discussion of the most effective forms of substance abuse intervention for offender populations. Research on non-offender populations is included wherever required. The review begins with an overview of offender programs; specifically examining the principles of risk, need, and responsivity (Andrews and Bonta, 1998). These principles provide the basis for a discussion of the characteristics of effective treatment.

The review goes on to examine the treatment philosophies of cognitive-behavioral and disease models in order to see how the "problem" of substance abuse is defined from different theoretical perspectives. The conceptual review is followed by an examination of various treatment techniques. This section includes a review of those techniques found to be effective as well as techniques where mixed evidence exists for outcome effectiveness.

The review sets a high standard to define outcome effectiveness. Effectiveness is explored according to a variety of outcomes (e.g., reduced substance abuse or reduced recidivism) that covers an average period of one-year period following treatment. The review examines treatment techniques that do not have direct evidence for outcome effectiveness but do address areas of offender needs that are important within the overall treatment context. For example, educational approaches have been used to move offenders from precontemplation (i.e., not prepared for treatment) to contemplation (i.e., starting to prepare for treatment) in order to make offenders more receptive to action based skills later in treatment (e.g., Offender Substance Abuse Pre-Release Program, Correctional Service of Canada).

The review concludes with a discussion on treatments tailored for special needs populations and the importance of motivational interviewing as an effective treatment approach.

Effective Correctional Treatment

Andrews, Bonta and Hoge (1990) found that when recidivism is studied relative to the type and severity of criminal sanctions, more criminal sanctioning was associated with slightly higher rates of recidivism. Research indicates that the mean effect of correctional treatment services, averaged across a number of interventions, was greater and more positive than that of criminal sanctioning without the delivery of treatment services. In brief, correctional researchers have found that offender rehabilitation can be effective and can reduce recidivism (Gendreau et al., 1996; Andrews et al., 1990).

Risk, Need, Responsivity

Criminologists have identified characteristics of offender programs that are associated with reduced recidivism. Effective treatment models are based on the principles of risk, need, responsivity and professional discretion and program integrity (Bonta, 1997; Weekes et al., 1997; Andrews, et al. 1990).

The **risk** principle is premised on the fact that high-risk offenders have the most to gain from treatment in terms of reducing risk for future involvement in crime. Thus, the most costly and intensive treatment resources should be allocated for high-risk offenders. Low risk offenders are thought to require minimal intervention (Wanberg and Milkman, 1998; Weekes et al., 1997). Evidence suggests that intensive levels of services with low risk offenders are ineffective and may even increase recidivism (Bonta, 1997).

The **need** principle refers to two types of offender needs: criminogenic and non-criminogenic. Criminogenic needs refer to offender needs which, when altered, are associated with decreases in recidivism. Examples are pro-criminal attitudes, criminal associates, substance abuse, antisocial personality, problem-solving skills, and hostility/anger. Non-criminogenic needs are those needs which, when altered, are not associated with a change in criminal behavior. Examples include self-esteem, anxiety, feelings of alienation, psychological discomfort, group cohesion, neighborhood improvement (Bonta, 1997; Weekes et al., 1997).

The **responsivity** principle refers to offender characteristics that influence the individual's response to treatment (Weekes et al., 1997). Certain personality and cognitive-behavioral characteristics of the offender influence how responsive he or she will be to the treatment and the way in which treatment is delivered (Bonta, 1997). Meta-analysis research demonstrates that cognitive-behavioral treatments are more effective than other forms of treatment (Andrews et al., 1990).

Two additional principles associated with effective correctional treatment are professional discretion and program integrity. **Professional discretion** refers to a program design feature that allows professional staff to make treatment placement decisions based on unique characteristics of the offender that are not addressed by the principles of risk, need, and responsivity. Bonta (1997) uses the example of some sex offenders who score low risk on many objective risk instruments while other factors, which are known to the professional, exist that may indicate a higher level of risk. Professional discretion allows programming to be tailored to the offender by taking both assessed risk and unique characteristics into consideration.

Program integrity refers to the necessity of conducting treatment in a structured manner according to the principles outlined and with dedicated staff (Bonta, 1997). Program integrity is assured by implementing a system of quality control, clinical supervision and program oversight aimed at insuring that programming is delivered consistently and as intended to all offenders.

Characteristics of Effective Correctional Treatment

The principles of risk, need and responsivity provide the basis for detailing the characteristics of effective correctional treatment. This literature review explores 10 characteristics that are associated with treatment effectiveness (Andrews and Bonta, 1998 and CSC, 1992):[1]

1. Level of service matched to level of risk. This includes issues such as reserving intensive services for those at higher risk and significant time allotment.
2. Criminogenic needs specifically addressed in treatment. Antisocial attitudes, criminal companions, and chemical dependencies are three crucial factors to be considered.
3. Treatment is consistent with the offender's learning style and personality. For example, concrete thinkers benefit from highly structured programs.
4. Treatment is based on cognitive-behavioral principles.
5. Treatment is delivered by therapists who are interpersonally sensitive, appropriately supervised, and knowledgeable of the psychology of criminal conduct.
6. Treatment is delivered with integrity—the actual delivery must conform to the program principles and it must be based on a conceptual model of criminal behavior.
7. Programs are delivered with integrity in a structured, manualized format.
8. Relapse prevention is offered in the community with seamless transition from institution to community.
9. Programs include a well-designed evaluation framework.
10. Programs are based on methods supported by controlled outcome research.

Correctional research reveals that interventions that are clinically relevant are more useful in reducing recidivism than interventions based on criminal sanctions. Clinically relevant interventions are ones that are structured and focused. These types of interventions are effective in reducing recidivism (Lipsey, 1989).

Substance Abuse and Crime

Research indicates that a significant proportion of the offender populations have substance abuse problems (Boland, 1998). Substance abuse, particularly alcohol abuse (Parker and Auerhahn, 1998), has been found to be associated with violent crimes among both adults and young offenders and has been implicated in murders (Andrews and Bonta, 1998). Substance abuse has been shown to be a predictor of recidivism among offenders (Gendreauet al., 1996). In sum, alcohol and drug problems are among the top-ranked criminogenic factors in need of direct intervention (Weekes et al., 1997).

Today more is known about the range of severity of substance abuse problems in offender populations. A recent statewide assessment of the offender population in the State of Maine revealed that close to 94% of the offender population had some type of substance abuse problem. Close to 40% of the population have none to low-level severity problems

while the remaining 54% of the population has problems ranging from moderate to severe. The Correctional Service of Canada found that 56% of all federal offenders were directly under the influence of alcohol and/or drugs on the day of their offence (Computerized Lifestyle Assessment Instrument, Correctional Service of Canada, 1988).[2]

Effective Substance Abuse Treatment

The issue of effective substance abuse treatment programs for offenders is one of complex dimensions. On one level, the goal is to deal successfully with the issue of criminal behavior and recidivism. On another level, the challenge is to deal with the issue of substance abuse and relapse. Given the contribution of substance abuse to criminal behavior and recidivism, neglecting to effectively treat substance abuse contributes directly to higher rates of recidivism.

Reviews or research on treatment programs for substance abuse indicate that there is no single technique or program that is effective in treating substance abuse among all substance abusers whether offender or non-offender (ARF, 1994). In the case of offender populations, multiple needs and levels of criminal risk present several challenges, such as delivery of treatment services to multiple need offenders (e.g., dual disorder treatment). At the same time, there is a wide range of effective techniques with which to treat both offender and non-offender populations. Programs that promote a positive client-therapist relationship but follow a structured format are associated with decreased relapse rates. Furthermore, cognitive-behavioral styles of interventions appear to be more effective with moderate to higher risk substance abusing offenders (Andrews and Bonta, 1998; Bonta, 1997; Millson et al., 1995).

Client-Treatment Matching

An important subtext of this discussion is the issue of client-treatment matching, which is extremely important in light of multiple needs of offenders. Different types of offenders require different types of treatment. Many offenders may require no substance abuse treatment, but may require treatment in another criminogenic need area (e.g., sex offending, cognitive deficits, anger management). Client-treatment matching refers to reliably assessing both client characteristics and treatment variables.

Research has identified a number of pertinent client variables associated with successful treatment outcomes. For example, Annis (1988) demonstrated the necessity of matching personality characteristics to different types of treatment. She randomly assigned offenders with low and high self-esteem to highly confrontational group psychotherapy or to institutional care. Alcoholic offenders with high self-esteem had better outcome in group therapy than in routine management. In contrast, the reverse was true of alcoholic offenders with low self-esteem. Similarly, Kadden et al. (1990) found that cognitive-behavioral techniques were more effective with non-offenders who scored high on a measure of antisocial personality functioning than were traditional counseling techniques.

Outcome Research

Programs incorporating cognitive-behavioral components have been evaluated for their effectiveness. For example, the Rideau Treatment Centre prevention program has offered a cognitive-behavioral program to substance abusing inmates at a prison in Ontario, Canada for the past decade. Marquis et al. (1996) conducted an evaluation that found empirical support for the intervention delivered at the Rideau Treatment Centre. Two groups of inmates who participated in the substance abuse relapse prevention program were compared with a waiting list comparison group. The second treatment group also received anger management training. Both treatment groups were highly structured, cognitive-behavioral treatments.

The targets for treatment were relevant criminogenic needs (in this case, substance abuse and anger/aggressive behavior). Attention was also given to the risk level of the offenders as measured by the Level of Supervision Inventory-Revised (LSI-R) (Marquis et al., 1996). Upon follow up from prison, the recidivism rate was 41% for the treatment group and 62% for the comparison group. Substance abuse treatment alone had no impact when type of recidivism was analyzed (violent versus nonviolent). However, inmates who also received anger management training showed significantly lower violent recidivism rates than the non-treatment group (34% versus 59%). This study demonstrated the importance of assessing and targeting the multiple criminal needs of offenders.

The Offender Substance Abuse Pre-Release Program (OSAPP) and the "Choices" Community Substance Abuse Relapse Prevention Program are two treatment programs that have demonstrated success in Canada. Choices is the community counterpart to the institution-based OSAPP. Both programs are multifaceted, cognitive-behavioral substance abuse intervention programs and both offer similar key skills. Choices is specifically designed for assisting offenders living in the community. The focus is on prevention and relapse management techniques that apply to high-risk situations which most parolees will deal with in the community.

Evaluation studies conducted on both Choices and OSAPP provide evidence that client matching and cognitive-behavioral intervention strategies are important factors in reducing recidivism. Millson, Weekes and Lightfoot (1995), evaluated OSAPP based on an offender sample from a medium security institution. Their report provides evidence supporting the effectiveness of cognitive-behavioral substance abuse treatment for offenders. Examination of both pre- and post-program changes suggested that cognitive-behavioral treatment is an effective intervention for the development of skills and cognitive abilities that are critically important in reducing both re-admission into custody as well as substance use.

Over the course of a 15-month follow-up period, 31.3% of the 287 offenders treated in the OSAPP were readmitted into custody. This is in the same range as the 28.4% revocation rate observed in the Choices study. These results contrast with evaluation studies conducted on the Stay'N Out Program in the United States. Stay'N Out is a

therapeutic community where substance abusing offenders stay for a period of several months to over a year. Wexler et al. (1990) found that over a 13.1 month follow-up period, 27% of participants were rearrested compared with 35% of a "milieu" treatment group and 40% of a waiting list control group. Over an almost identical follow-up period the Choices program, which is of a shorter duration and less intensity, observed a revocation rate of 28.4% (Lightfoot and Boland, 1994).

Research demonstrates that substance abuse treatment is effective and can be successfully applied to offenders. Treatment programs that are based on cognitive-behavioral principles and that target criminogenic needs appear most effective in reducing problem behavior.

Treatment Philosophies

Cognitive-Behavioral Model

Behavioral therapy is based on theories of how people reduce undesirable behaviors and learn new, more desirable ones. The emphasis is on overt behavior change guided by specific treatment objectives. The cognitive-behavioral model utilizes principles that originated with learning theory, and social and experimental psychology. Approaches that augment self-control are used to work toward, and achieve, environmental change and teach effective social interaction. Behavior therapy focuses on client responsibility for change and the development of an effective, working therapeutic relationship. Some commonly used behavior therapy techniques are coping and social skills training, contingency management, modeling, anxiety reduction, relaxation methods, self-management methods, and behavioral rehearsal.

The implicit principle of cognitive therapy is that disturbance in behaviors, emotions, and thought can be modified or altered by learning new ways of thinking about the world and oneself. Cognitive therapy is based on the idea that thoughts and attitudes create moods rather than the events themselves. Emotions are experienced as a result of the way in which events are interpreted. The meaning of the event triggers emotions as opposed to the events themselves. The therapist in cognitive therapy assists the client in seeing alternative ways of thinking about and appraising a situation. Cognitive intervention approaches include problem solving, relaxation therapy, modeling strategies, restructuring of cognitive distortions of negative schemas, challenging maladaptive assumptions, and identifying and challenging automatic thoughts (Wanberg and Milkman, 1998).

<u>Principles of Cognitive-Behavioral Therapy</u>

A comprehensive review of alcoholism treatment outcomes conducted by Miller et al. (1995) found that treatment approaches with the highest efficacy ratings were brief intervention approaches (including motivational enhancement), skills training strategies, marital/family therapy (including cognitive-behavioral marital/family), and cognitive-behavioral approaches (c.f. Wanberg and Milkman, 1998).

A wide variety of communication skills and cognitive behavioral training protocols were also found to be effective (where efficacy refers to reduction of drinking, fewer severe relapse episodes, abstinence). Some of these included rehearsal of communication skills, assertiveness training, behavioral rehearsal of assertiveness skills, refusal skills, enhancing expression of feelings, problem analysis and production of adaptive responses, role-playing, modeling and video feedback, and cognitive re-structuring (Monti et al., 1995).

Disease Model

The disease model explains addiction based on a pre-existing or induced biological abnormality of chemical, physiological, or structural nature in the individual. Although widely adapted in the United States, the disease model is far from a homogeneous view of addiction, and few well-designed studies exist which explore the validity of disease model tenets (McCrady et al., 1996).

Genetic theories attempt to explain alcoholism as an inherited disease. Evidence suggests that alcoholism is genetically determined to some degree. However, genetic theories alone do not provide a full explanation of alcohol problems even in cases where there is some evidence of inheritance as a factor. Further, inheritance cannot explain the majority of cases of alcoholism.

Schuckit (1994) argues that the magnitude of the genetic impact on alcoholism is not easily established for various reasons and that the following range of factors intersect to affect study results:

1. The definition of alcohol dependence;
2. The decision to combine all severe alcohol-dependent pictures together or to focus on those occurring in the absence of severe psychiatric syndromes;
3. The potential impact of environmental events; and;
4. The probable existence of genetic heterogeneity within different pedigrees of primary alcoholics.

The specific causes of alcoholism are not known, and it is important to recognize that a specific gene contributing to the majority of the alcoholism risk may be difficult to identify, and the results from one pedigree might be difficult to replicate in others. Alcoholism could be a disorder carrying a significant level of genetic influence, but where no single genetic defect causes the syndrome. Rather, a combination of varying levels of environmental influences along with genetic factors contribute to multiple aspects of normal daily functioning (Schuckit, 1994).

Alcoholics Anonymous (AA) is based, in part, on another biological theory. Although no specific mechanism has been proposed, the view of Alcoholics Anonymous is that alcoholism results from an "allergy" to alcohol, as a result of which one drink leads to a loss of control over subsequent alcohol consumption. Although it is true that many alcoholics drink in a compulsive manner, this has not been shown to be the result of the chemical effect of a single dose of alcohol (Rankin, 1978).

Individuals, treatment programs, and the judicial system often utilize AA. Despite the popularity of AA, empirical research on its effectiveness has been limited mainly to studies that evaluate the outcome of a single treatment program with no comparison to a control or alternative treatment condition. McCrady et al. (1996) report that three randomized clinical trials have evaluated the effectiveness of AA in comparison to another intervention. Even fewer studies, however, exist that focus on evaluating the effectiveness of AA compared with no treatment. Of the three randomized clinical trials none found AA to be more effective than the comparison treatment. In fact, two of the studies found better response to the comparison treatments than to AA (McCrady et al., 1996). While there is a lack of well-controlled studies that support its clinical effectiveness, some research exists which attests to a generally positive relationship between drinking outcome and AA attendance (Donovan et al., 1994).

At the same time, evidence exists for the efficacy of specific types of 12-step approaches to treatment. Project Match (Project Match Research Group, 1994) showed positive long-term outcome for a treatment based on 12-step principles. The 12-step intervention used for Project Match is fairly unique given that it was highly structured with well-detailed treatment protocols and treatment supervisions.

Effective Substance Abuse Treatment Strategies[3]

This section provides a discussion of various techniques that have been found to be effective in the treatment of substance abuse.[4]

Controlled Drinking Strategies

Several researchers have published recent reviews of the research on controlled-drinking treatment and moderation training with alcohol-dependent clients. Combined, these reviews highlight a number of issues (Larimer et al., 1998; and Rosenberg, 1993; Ojehagen and Berglund, 1987):

1. some alcohol-dependent clients choose and achieve moderation goals even when participating in traditional abstinence-oriented treatment programs;
2. over time, rates of abstinence tend to increase. This means that many alcohol-dependent clients choose abstinence despite being trained in controlled-drinking strategies, and suggests that attempts at controlled drinking can be a stepping stone to abstinence for some clients;

3. greater treatment retention and recruitment of a broader range of problem drinkers may result by providing clients with opportunities and choices of goals. The risk of relapse to uncontrolled drinking is not increased;
4. factors including client characteristics, goal choice, and severity of dependence may be related to treatment outcome. When clients are given a choice, they tend to choose the goal that is most appropriate for the severity of their problem, and have a greater likelihood of achieving that goal.

Methadone Maintenance Treatment

Methadone is a synthetic opiate that prevents abstinence symptoms (i.e., withdrawal). It also serves to decrease cravings for opiates and blocks euphoric effects of other opiates by creating cross-tolerance. Unlike narcotic analgesics like heroin, methadone has a longer half-life, is administered once per day, is less intoxicating, and users experience less euphoria and impairment. Methadone maintenance treatment (MMT) was developed as a substitute for heroin and was intended as a maintenance medication much like insulin is for the treatment of diabetes.

The first trials of the outcome of MMT were performed by Dole and Nyswander in 1968. Results indicated that most clients continued in treatment for as long as was possible. Further, in contrast to other detoxified clients, while methadone clients did use some illicit drugs during the first few weeks, this usually decreased in a gradual manner. Steady increases in employment and a reduction in criminal behavior were also noted. Clients who were randomly assigned to methadone maintenance made statistically significant improvements in drug use, criminal involvement, employment, education and child rearing (Tapert et al., 1998).

Additional evidence exists that attests to the effectiveness of methadone maintenance therapy. Marsch (1998) conducted a study employing meta-analytic statistical procedures to determine the effectiveness of methadone hydrochloride as a pharmacotherapeutic agent. Empirical research findings from 11 studies investigating the effect of MMT on illicit opiate use, eight studies investigating the effect of MMT on HIV risk behaviors and 24 studies investigating its effect on criminal activities were addressed. Results demonstrate a consistent, statistically significant relationship between MMT and the reduction of illicit opiate use, HIV risk behaviors and drug and property-related criminal behaviors. The effectiveness of MMT is most apparent in its ability to reduce drug-related criminal behaviors. MMT had a moderate effect in reducing illicit opiate use and drug and property-related criminal behaviors, and a small to moderate effect in reducing HIV risk behaviors.

Currently, alternatives to methadone are being developed and used in some locations. For example, buprenorphine is an anti-antagonist to heroin that possesses a longer period of action. It has less of an analgesic effect than methadone and opposes the actions of heroin such that the individual will not experience a euphoric effect in the event that heroin is used. Strain et al. (1994) compared the efficacy of buprenorphine to methadone for decreasing cocaine use in patients with combined opoid and cocaine use. Results

indicated that buprenorphine and methadone were equally effective on measure of treatment retention, urine results for opiods, and compliance with attendance and counseling.

Provision of Aftercare

The primary function of aftercare techniques is to maintain the gains in functioning achieved through treatment. Given that approximately 66% of relapses occur within the first 90 days following treatment, aftercare is a crucial intervention (Marlatt and Gordon, 1985).

Johnsen and Herringer (1993) examined abstinence rates among former patients (N=50) of an inpatient substance abuse treatment facility. Attendance at aftercare meetings and attendance at Alcoholics Anonymous or Narcotics Anonymous meetings were significantly related to post-treatment abstinence. Further, the results indicate that sobriety increased in proportion to the number of different supports used by the client.

Investigations have also focused on aftercare contracts to enhance the effectiveness. Ossip-Klein and Rychtarik (1993) studied behavioral contracts between alcoholics and family members to improve aftercare participation and maintain sobriety after alcoholism treatment. Fifty male alcohol abusers who had recently completed a four-week inpatient alcoholism treatment program were randomly assigned to either receive a calendar prompt and behavioral contract with a family member to reinforce aftercare participation, or to a standard aftercare arrangement. During the six months preceding discharge, the results showed significant aftercare attendance differences with approximately twice as many contract clients attending aftercare sessions as standard aftercare clients. At one year follow-up, the results indicated that subjects in the contract condition had significantly more months of abstinence and were more likely to be classified as a treatment success.

Problem-Solving Training

Problem-solving training teaches the client appropriate strategies for coping with a stressful environment or situation without returning to substance abuse as a way to alleviate the situation. The approach originated with D'Zurilla and Goldfried (1971) who formulated a problem-solving approach consisting of five steps: orientation, definition, generation of alternatives, decision making, and verification. The approach continues to be used, often in a modified form and in conjunction with other techniques (Smith and Meyers, 1995). Some research attests to the effectiveness of the approach. Intagliata (1978, 1979) conducted a study where patients assigned to a treatment involving interpersonal problem solving skills were found to have better problem solving skills than those patients assigned to the control group. At one month follow-up, patients reported applying problem-solving skills to everyday life. Problem solving in combination with multi-model treatment does produce positive long-term outcome findings (CSC, 1996).

Relapse Prevention

Cognitive-Behavioral Model

Dr. Alan Marlatt formulated relapse prevention in the 1970s. Dr. Marlatt's work is based on his reading of a study by Hunt et al. (1971) that detailed relapse rates after treatment for several types of addictive behavior.

Marlatt's original work involved asking individuals at follow-up to describe the situation that precipitated their relapse. These were referred to as high-risk situations. He found that there were three categories that accounted for three-fourths of the relapses—(1) negative emotional states; (2) social pressure; and (3) interpersonal conflict. This research formed the basis for a major part of the relapse prevention model; specifically, the identification of situations likely to place one at risk for relapse, and the development of skills to avoid those situations or to effectively deal with them. Key components of the model include the anticipation and identification of high-risk situations, the acquisition of skills to deal with the situations, and possessing expectations that use of those skills will result in a positive outcome. An additional aspect of Marlatt's relapse prevention approach focuses on how individuals react to a relapse. Specifically, the individual experiencing a relapse must end the relapse, quickly minimize the damage, and view the slip as an isolated incident rather than as an indication that recovery is impossible.

Early studies on relapse prevention were conducted by Chaney et al. (1978) where the efficacy of social skills training treatment for alcoholics was evaluated. Findings indicated positive results that increased over time. Sobell and Sobell (1993) reviewed 12 studies relating to relapse prevention and concluded that evidence supports the efficacy of relapse prevention although improvements attributable to relapse prevention tend to be modest.

12-Step/Disease Model

One of the main contributions of relapse prevention to the addictions field is that it legitimized acknowledging that relapse was a frequent event following treatment. Perhaps for this reason, it has become fashionable for many service providers to proclaim that they provide "relapse prevention treatment." In this regard, perhaps the most widely available treatment referred to as relapse prevention is an approach based on Gorski's (CSC, 1996) developmental model of recovery. This approach superficially relates to two bodies of research literature: relapse prevention and the stages of change. According to Gorski's model, six stages of recovery exist:

1. Transition—the individual recognizes problems but attempts to overcome them by controlling substance use.
2. Stabilization—the individual decides to refrain from substance use completely and recuperates for an extended period.
3. Early recovery—the individual becomes comfortable with abstinence.

4. Middle recovery—the individual repairs damage created during substance abuse and develops a balanced lifestyle.
5. Late recovery—the individual overcomes barriers to a healthy lifestyle which originate with childhood experiences.
6. Maintenance—the individual recognizes a need for continued growth and balanced living.

Gorski's model is explicitly linked to the philosophy and operations of Alcoholics Anonymous.

Gorski's model of recovery is often confused with Marlatt's model or relapse prevention. While both approaches have come to be known as "relapse prevention," a number of differences exist. First, Marlatt's relapse prevention model is based on scientific research while Gorski's is not. Marlatt originally formulated his notion of relapse prevention as an explanation for data obtained in treatment outcome studies. It consists of a well-formulated and testable set of hypotheses about factors that determine the likelihood of relapse. Research continues to test various aspects of this model. In contrast, Gorski based his ideas on personal observations as a chemical dependency counselor over a period of several years. In essence, Gorski's approach is a restatement of the traditional 12-step approach to treatment aided by structured written exercises. Gorski's relapse model fails to deliver highly individualized treatment strategies that incorporate the individual's unique circumstances, learning history, and environment; something for which Marlatt's prevention model is equipped. Marlatt's prevention model places particular emphasis on ways to minimize the damage associated with relapse. The goal is to learn from relapse so as to avoid relapse in the future and cognitively process relapses in order to avoid diminishing one's motivation to succeed. Gorski's model deals minimally with relapse, beyond acknowledging that "each of us will get stuck in our recovery process periodically" (Gorski, 1989). Marlatt's approach supports treatment aimed at individuals gaining skills to overcome their problem, thereby increasing the individual's sense of self-efficacy. In contrast, Gorski is consistent with the 12-step model and requires an admission that the individual has become "powerless" over alcohol.

Social Skills Training

According to Monti et al. (1995), social skills deficits can include lack of adequate skills to regulate positive and negative mood states and to cope with social-interpersonal situations, including work, parenting, and marital relationships. Monti et al. (1990) evaluated three social learning approaches to the treatment of alcoholism used in standard inpatient treatment. Sixty-nine male alcoholics participated in either a communication skills training group (CST), a communication skills training group with family participation (CSTF), or a cognitive-behavioral mood management training group (CBMMT). At six month follow-up, alcoholics in a standard inpatient treatment program who received CST, with or without significant other involvement, consumed significantly less alcohol per drinking day than alcoholics who received CBMMT. The three treatment strategies had no differential effect on whether an alcoholic relapsed, how

quickly relapse occurred, or number of days of abstinence. However, communication skills training resulted in alcoholics consuming less when they did drink.

Community Reinforcement and Contingency Management

The Community Reinforcement Approach (CRA) and other contingency management approaches such as the vouchers for sobriety programs of Higgins and his coworkers at the University of Vermont have been among the programs whose efficacy has been best documented by research. These programs are based on operant reinforcement theory. They focus on helping to restructure the client's environment to shift away from "enabling" substance use to promoting positive behaviors that are incompatible with substance use. This is accomplished by mobilizing significant others in the client's life to reinforce positive behaviors. In addition, inappropriate behaviors associated with substance use carry negative effects or costs that are immediately administered. Numerous studies have found these approaches to be effective with alcohol, cocaine and opiate dependent individuals when contrasted with more traditional, non-operant approaches (Bickel et al., 1997; Budney et al., 1991).

Techniques with Mixed Evidence of Effectiveness

There are several techniques that demonstrate some degree of treatment success for clients with specific needs. Mixed effectiveness can refer to shifts in knowledge, attitude, or beliefs or some type of short-term behavior change that occurs despite failure to maintain long-term abstinence. These techniques are often helpful when developing multi-modal treatment approaches.

Detoxification

Detoxification refers to assisting people return to a drug-free state by eliminating alcohol and/or drugs from their bodies. Detoxification centers provide a safe environment in which to accomplish this goal and to deal with the symptoms of withdrawal. These services may be provided with or without medical supervision. During detoxification, clients achieve a minimal level of acceptable physical, psychological, and social functioning. Medical treatments last for a few days and are intended to avoid the adverse effects experienced through withdrawal. Non-medical detoxification (also referred to as the social model) involves monitoring the individual during withdrawal over a brief timeframe, without the use of prescription drugs.

Research indicates that detoxification centers are often successful in assisting individuals to withdraw from alcohol and drugs in the short term. It is usually the first step in treatment intended to achieve long-term behavior change. However, linking patients to future treatment geared toward long-term change is often difficult. First, many clients who utilize detoxification centers do so with the sole goal of detoxification. There is no intention to stop using drugs and/or alcohol. For example, heroin users will often detoxify in order to decrease their tolerance level so less of the drug is required. Second,

many detoxification centers suffer from lack of funding and poorly paid staff. Therefore, they lack the capacity to make effective referrals (CSC, 1996).

Critics argue that detoxification without rehabilitation and follow-up services offers little more than a comparable period in jail and often leads to the "revolving-door" syndrome (Addiction Research Foundation, 1994). However, others assert that the key goals for detoxification are not so much rehabilitative as they are social and economic. These goals include getting those who are intoxicated off the street, providing medical care, redefining drunkenness as a medical/social welfare problem rather than a social justice problem, and reducing criminal justice costs (Ross and Lightfoot, 1985).

Drug and Alcohol Education

Drug and alcohol education is a standard component of most substance abuse interventions for both offenders and non-offenders (Montagene and Scott, 1993; Peters et al., 1992). Some evidence suggests that abusers are less knowledgeable about the negative effects of substance use compared with non-users (Senn, 1983). Education can be presented as a component of multi-modal treatment programs with participants who present serious substance abuse difficulties. Conversely, it can be offered as a single prevention program to individuals who are beginning to experience problems or who are at high risk for encountering substance use difficulties.

Reviews indicate that drug and alcohol education programs on their own, have little impact on changing substance abuse behavior (Eliany and Rush, 1992; Montagne and Scott, 1993). The challenge in determining effectiveness rests with establishing the appropriate target: change in knowledge, attitudes, or actual behavior (Montagne, 1982). A lack of understanding concerning the three domains exists and research has not determined whether what is learned in one domain affects other domains (Leukefeld and Bukoski, 1991).

Nevertheless, research has indicated that the use of drug and alcohol education can have an effect. Duguid (1987) reported on the impact of the Prison Education program offered to drug-involved federal offenders by Simon Fraser University. The program curriculum did not include solely drug and alcohol education. Rather, the activities included all on-campus activities at the liberal arts college. An evaluation comparing 65 student inmates to 65 non-student inmates showed that 50% of the non-students returned to prison within three years of release whereas only 16% of the students returned. Although substance use knowledge and return to drug and alcohol use were not analyzed, the results suggested that the education program had an impact on post-release success for the drug-involved inmates.

Employment Training

The goal of employment training for substance abusers, either as a single program or as a component of a multi-faceted program, is to develop or enhance the skills necessary to secure and maintain employment after completing treatment. The rationale for offering occupational upgrading derives from studies that found that individuals who present serious drug and alcohol abuse problems also experience difficulties in securing and maintaining employment (Capone et al., 1986; Malla, 1988; Schmidt, 1992).

Post-release employability is affected not only by substance abuse difficulties, but also by the impact of incarceration. In the past, researchers have concluded that one of the greatest obstacles for the former offender seeking employment is that he or she is unable to provide the skills and qualifications demanded by the marketplace (Miller, 1972). Motiuk and Porporino (1989) have provided more recent evidence. Briefly, from a sample of 221 federal offenders, the majority presented employment skills as a need to be developed prior to release. Some research exists attesting to the effectiveness of employment training for substance abusing offenders. Funderburk et al. (1993) evaluated a treatment program for violent criminal offenders with alcohol abuse problems. A major component of the program was to mobilize community resources to improve the job-finding skills of the offenders. A one year follow-up indicated an overall significant improvement in life adjustment and employment as compared with intake levels. Specifically, the employment situation of more than twice as many offenders had improved rather than deteriorated.

Marital and Family Therapy

Marital and family therapies strive to promote sobriety by improving family and marital relationships (Miller et al., 1995). A variety of approaches are employed, usually within a family systems perspective. The treatments can consist of meetings with the entire nuclear family. Other approaches may focus on all family members except the substance abusers, or solely the couple. These treatment approaches have generally been used with problem drinkers (Eliany and Rush, 1992).

Marital and family therapies with a behavioral orientation focus on teaching communication skills and building the level of positive reinforcement within relationships (Miller et al., 1995). Such methods have been studied more extensively than others and also have the greatest empirical support (O'Farrell, 1995).

McCrady et al. (1991) compared the effectiveness of three spouse-involved outpatient behavioral treatments: minimal spouse involvement, alcohol-focused spouse involvement, and alcohol-focused spouse involvement plus behavioral marital therapy. After an 18-month follow-up, subjects in all conditions reported significant decreases in frequency of drinking and frequency of heavy drinking. They all reported increased levels of life satisfaction. Outcome patterns across the three conditions differed with the alcohol-focused spouse involvement plus behavioral marital therapy showing gradual improvement in the proportions of abstinent days and abstinent plus light drinking days over the last nine months of follow-up. In the other two treatment conditions, subjects indicated gradual deterioration in the proportion of abstinent days and abstinent plus light drinking days. Those subjects in the alcohol-focused spouse involvement plus behavioral

marital therapy were less likely to experience marital separations and reported greater improvement in marital satisfaction and subjective well-being than subjects in the other treatment groups.

In a review conducted by O'Farrell (1995), it was concluded that marital and family therapy could be used effectively to motivate an initial commitment change in an alcoholic and to assist the spouse when the drinker resists treatment. In addition, he asserts that correlational research indicates an association between spouse involvement in Al-Anon and more sobriety for the alcoholic and improved coping for the spouse.

Psychiatric Care

Psychiatric care refers to clinical services where the provider is trained in psychiatry. These services may be viewed as overlapping with other treatment modalities. There are two types of psychiatric care that are particularly important for the purpose of this paper: the treatment of psychiatric comorbidity and the use of psychotropic medications. In both cases, the supervision of these treatments is done by physicians, particularly psychiatrists. Epidemiological evidence indicates that a substantial number of persons with substance abuse disorders also qualify for a diagnosis of having a concurrent mental disorder, particularly mood disorders and sociopathy (Anthony et al., 1994; Kessler, 1991; Kushner et al., 1990). Research also indicates that persons with a substance use disorder plus an associated mental health disorder tend to have poorer treatment outcomes than persons with no comorbid disorder (McLellan, 1986). While uncertainty remains concerning the most effective way to treat comorbid disorders, programs that engage the service of psychiatrists are likely to address the issue of mental disorders in treatment.

Recreational Therapy

The goal of recreational therapy is to increase positive reinforcement for behaviors that occur during an individual's everyday life. Focusing on positive reinforcement for behaviors allows the therapist to reduce the stressors associated with substance abuse. Marlatt (1985) noted that a balanced lifestyle is characterized by a relative degree of balance in the individual's daily activities between sources of stress and personal sources for coping with stress.

Recreational therapy is currently employed as a central component in both the Offender Substance Abuse Pre-Release Program (OSAPP) and the Community Correctional Brief Treatment, Relapse Prevention and Maintenance Program (Choices). Marlatt's clinical observations led him to conclude that the degree of balance in a person's daily lifestyle had a significant impact on the desire for indulgence or immediate gratification. OSAPP and Choices work with offenders in establishing the balance between those activities perceived as external demands ("shoulds") and those perceived as pleasures or self-fulfillment ("wants"). Creating an imbalance in either area increases the risk for a possible slip or relapse.

Stress Management Training

Stress management training is another approach that is located under the general rubric of broad-spectrum treatment. A stress management approach is predicated upon the hypothesis that stress is an antecedent of drinking and relapse (Eliany and Rush, 1992). However, stress management strategies such as systematic desensitization and relaxation training have experienced weaker support (Miller et al., 1995).

Relaxation training is used to assist people to reduce their overall level of physiological arousal, to reduce the craving to drink, to sleep more easily, and to deal with particular environmental factors that result in anxiety (Eliany and Rush, 1992). While a large body of research indicates little additive benefit from relaxation training alone (Miller et al., 1995), a number of controlled studies that have included drinking behavior among the outcome measures indicate small, positive effects from the addition of relaxation training to other forms of treatment (Eliany and Rush, 1992). Still other studies have found no impact on drinking measures of a relaxation intervention thus indicating inconsistencies in the effectiveness of relaxation therapy (Eliany and Rush, 1990).

Systematic desensitization is another technique that strives to assist clients cope with situations. This involves the client imagining fear-arousing situations after attaining a deep state of relaxation. At the point where fear begins to interfere with the relaxed state the client ceases thinking about the situation (Smith and Meyers, 1995). Overall, there have been inconsistent results concerning the effectiveness of systematic desensitization (Miller et al., 1995). There has been limited evaluation of this technique for the treatment of alcohol problems and high dropout rates inhibit evaluation.

Special Needs Populations

Women

There is a dearth of research concerning evidence-based treatment for incarcerated women. As Henderson (1998) writes in her review of the literature "There has been little research regarding incarcerated women with substance abuse problems, beyond identifying that it is a problem for a majority of female inmates." In light of the lack of direct evidence, the following questions will be addressed:

1. What do surveys of female offenders tell us that is particularly relevant to their substance abuse treatment needs?
2. What kinds of programs have been piloted for women offenders, and what (if any) outcome data exists?
3. What's the relevant evidence from non-offender women? What state-of-the-art programs are designed to address women's particular needs?

Survey Findings

Although female substance abusers in general have high rates of sexual and physical abuse (see Windle et al., 1995 for discussion), surveys of female offenders show rates even higher than that of the general population. In a survey of 128 men and women, randomly selected from a Massachusetts Department of Corrections list of offenders with alcohol problems, Walsh (1997) found that significantly more females than males reported physical abuse (84% versus 52%); the same was true of sexual abuse (72% versus 11%). More female than male inmates had engaged in physical altercations with their partners (83% versus 56%), with women generally reporting being the "victim" in these assaults.

Wellisch, Anglin and Prendergast (1993), cite a 1990 American Corrections Association survey that found that 35% of women reported sexual abuse, and more than 50% physical abuse. More than 50% reported physical abuse by their husband or boyfriend. Finally, in a 1995 survey of women (n=323) released on parole in the San Francisco area, Taylor (1996) reports that 80% of these women have a history of physical or sexual abuse.

Similarly, surveys show high rates of psychiatric disorders. Walsh (1997) reports that significantly more female than male inmates (88% versus 62%) had had some previous mental health treatment and that significantly more females than males (62% versus 16%) had at least one past suicide attempt.

Peters (1997), who surveyed 1655 consecutive inmates (including 435 women), referred to a jail-based substance abuse program that reported women were significantly more impaired than men on the Addiction Severity Index (ASI) dimension of psychiatric functioning. Female inmates reported significantly higher rates of serious depression than males and higher lifetime rates of suicide events.

Incarcerated women often lack stable relationships, and often have children. Peters (1997) found that the women in his sample had a higher rate of relationship problems than did men.

Wellisch, Anglin and Prendergast (1993) report that of the incarcerated women surveyed by the American Correctional Association, almost 80% had at least one child, and almost half of the women surveyed had had their first child at the age of 16 or younger. In Taylor's 1995 survey, 76% of the women have minor children, although 83% are unmarried or divorced.

The above surveys suggest a female population with high rates of abuse, psychiatric co-morbidity, and family/relationship difficulties. Peters (1997) sets forth a series of recommendations for substance abuse treatment based on his assessment of the needs of incarcerated women:

1. Co-occurring disorders (i.e., substance abuse and depression) should be treated simultaneously.
2. Careful assessment is necessary with this population, because more readily apparent substance abuse problems can mask evidence of abuse and/or depression.
3. Specialized modules within substance abuse treatment programs should provide a venue for inmates to address victimization issues and develop greater autonomy and relationship skills.
4. Relapse prevention should help inmates focus on how abuse or depression or low self-esteem can lead to the negative thoughts and emotions that trigger urges.
5. Group therapy, with female leaders, is an important venue in which women prisoners can combat isolation and develop mutual support.

Pilot programs

Several existing programs for incarcerated women are described in the literature. While the programs all focus on identifying and meeting the particular needs of women, there is often little empirical basis for their choices. Lockwood, McCorkel and Inciardi (1998) describe the creation of a treatment center on the campus of a correctional facility in Delaware. The authors describe the unique features of the program—an all-female treatment staff, programming focusing on health and medical issues, parenting courses, assertiveness and relationship skills training. During the program's first year of operation, the extent of participants' domestic violence issues became apparent, and a counselor experienced in these issues was hired. No data on participants or outcomes is provided.

Project WORTH is an ongoing study of programming for women offenders in eight drug treatment programs in New York City and Portland, Oregon. In a 1998 report, the investigators provide an impressionistic, qualitative report of women's needs and treatment approaches. (In each city, one program is prison-based, one jail-based, one community-based residential, and one outpatient.) The New York prison- and jail-based programs are based on the treatment center model. Turning Point, in Oregon, is a prison-based treatment program that addresses issues like sexual abuse, domestic violence and other victimization issues that co-exist with the drug use. See Project WORTH (1998) for a more in-depth description of the various treatments offered. Study authors report that there is not agreement across programs as to how central a role subjects' victimization histories should play in treatment. Apparently, some clients in victimization-oriented programs want more relapse-prevention; in more traditional drug treatment programs, some clients want to "go deeper" into their abuse histories.

Forever Free is a substance abuse treatment program at the California Institution for Women (CIW), described in Prendergast (1996). There is an intensive four-month

component offered to women in their last six months of incarceration, and then a six-month community-based residential program for program graduates on parole. In-prison services include individual substance abuse counseling, workshops and seminars, 12-step programs, parole planning and urine testing.

Jarmon (as reported in Prendergast, 1996) conducted a quasi-experimental study comparing outcomes for Forever Free (FF) women (n=196) with (a) women from other California prisons (n=107) and (b) women at CIW who did not elect to participate in Forever Free (n=110). The study found that length of time in treatment was correlated with success on parole: 38% of FF dropouts successfully completed parole, compared with 90% of those who graduated from FF and stayed for five or more months in the community based treatment component.

As a follow up to this study, Prendergast compared the parole experiences of three groups: (1) FF graduates who stayed in the aftercare program for at least 30 days; (2) women who completed FF but did not volunteer for aftercare; (3) women who volunteered for FF but who, for logistical reasons, hadn't been able to participate. Women were interviewed at least one year following release. The FF graduates who stayed in the aftercare program had the most successful parole outcomes: 68.4%, as opposed to 52.2% of the non-aftercare group, and 27.2% of the comparison group (figures significant). Prendergast's findings suggest that aftercare is a useful adjunct to a prison-based treatment program.

Non-offending Evidence

In her review of the literature on women and substance abuse disorders, Blume (1998) cites the need for assessment that (1) targets past history of sexual and/or physical abuse; and (2) diagnoses accompanying physical and psychiatric disorders. Women raised by alcoholic parents may have no adequate parenting models, and thus treatment targeting parenting issues may be indicated. Self-esteem is also often impaired, highlighting the need for assertiveness training.

The nature of a woman's relationships may have an impact on her ability to achieve and maintain sobriety. In a sample of 93 alcoholic women, Macdonald (1987) looked at the possible role social variables play as predictors of treatment outcome. These women, who underwent treatment of an unspecified nature at a Toronto facility were interviewed at one year follow-up. Women who were found to have many close and supportive relationships were found to have better outcomes, whereas the number of relationships identified as dysfunctional was significantly associated with negative outcome.

Chiavaroli (1992) argues that the failure to identify and address sexual abuse issues may increase individuals' relapse risk. A review of a sample of charts at an inpatient facility identified 20 patients with histories of sexual abuse. The author investigated the extent to which issues relevant to the recovery from sexual-abuse related trauma (e.g., self-esteem, social supports, guilt, etc.) were addressed in treatment. Her conclusions are that failure

to disclose past abuse results in less progress in the recovery from the behavioral correlates of abuse, thus placing the patient at risk for future relapse.

Possible Treatment Models

Najavits, Weiss and Liese (1996) present a cognitive-behavioral treatment model for women with co-occurring Post Traumatic Stress Disorder (PTSD) and Substance Abuse Disorder (SUD), although they do not present data about the implementation or effectiveness of the model. Although the authors note that Cognitive Behavioral Therapy (CBT) has been little studied with the PTSD population, they justify their choice of CBT on several bases: its utility in teaching patients to manage affect; its focus on self-control strategies such as impulse control, anger management and cue exposure; its focus on the teaching of functional behaviors such as relationship skills and adaptive lifestyle activities; and relapse prevention. The authors further argue that a group format is particularly useful with this population: "Treatment of both SUD and PTSD requires significant attention to validation of experience, shame reduction, and normalization because of strong feelings of self blame that often accompany the disorders." (Najavits, Weiss and Liese, 1996)

The program that the authors propose is geared toward an early-stage treatment of the trauma piece. Rather than focusing on an intensive exploration of patients' trauma history, the focus is on safety and self-care. Interventions are oriented to the present, members of the treatment group; all share the diagnosis, and a low level of conflict is maintained. Sessions similarly focus on early-stage recovery issues. The article spells out the proposed treatment program in detail.

The Self-In-Relation model, developed by theorists at the Stone Center at Wellesley College, is a theory of development that proposes that a "relational self" is a core self structure for women (Finkelstein, 1996). Within this context, theorists focus on what distinguishes healthy relationships from destructive ones. Finkelstein advocates for treatment that deals with relationships—with parents, partners and children, but also with systems like agencies and the courts—as well as substance use alone. Specific ways in which these goals might be put into operation in a treatment setting include:

1. Counselors model healthy relationships by paying close attention to issues of power, and by being open and honest.
2. Counselors help women develop non-sexual friendships, and to distinguish between healthy dependency and destructive relationships.
3. Counselors help women learn to express their needs and make their own decisions.
4. Domestic violence issues are not considered a distraction from the real work of treatment, but as an integral part of it. Women should be asked directly about both violence and sexual abuse, because they may well not reveal it if not directly asked.
5. It may not be helpful for women to be given labels like "co-dependent." A more apt goal may be to focus on and build on women's relational strengths.

Gender and Treatment

Treatment programs have been traditionally designed by men and for men. The language used, style of counseling and issues discussed in these programs are those which relate to men's lives. When men and women are treated together as a group a number of problems occur. The way in which men interact and the language used sets the tone. The result is that men do the majority of the talking and tend to interrupt when someone is speaking. Women are likely to take on a nurturing role with men in the group. Sexual tension and relationships may develop between some men and women in the group. Finally, the unique issues of women are often neglected in mixed groups (Addiction Research Foundation, 1996). Thus, there are a number of practical reasons that would make single-sex treatment advantageous.

Research supports the efficacy of single-sex treatment. Dahlgren and Willander (1989) evaluated a Swedish woman-only program aimed particularly at women's needs. One hundred alcohol-dependent women were randomly assigned to women's only treatment, 100 women were assigned to mixed-sex treatment. At two year follow-up, a significantly greater number of women who had been treated at the all-female facility achieved abstinence; and significantly fewer reported daily drinking.

Other research, however, is mixed. In a quasi-experimental evaluation, Copeland et al. (1993) compared client characteristics and six-month follow-up treatment outcomes for 80 patients enrolled in a residential specialist women's service (SWS) versus 80 females enrolled in two traditional mixed sex programs. Although the women's program was founded with a feminist agenda in mind, at the time of evaluation it differed from the mixed sex programs only in its all-female environment, and in its provision of residential childcare. Across conditions, 86% of the women had experienced sexual or physical abuse at some point in their lives Women in the all female facility were twice as likely to report sexual abuse. Both groups reported a number of significant improvements at six month follow-up, and no statistically difference in outcome between the women in the two conditions was noted. However, the authors note that this conclusion must be considered in light of the relatively small sample size, and thus the modest statistical power. Also, the SWS was not particularly different from the mixed-sex facilities, except in the two areas mentioned above. Thus, this study should not be read as suggesting that an all female environment is not desirable. Rather, the study suggests that while single-sex treatment can make a contribution, it is not, in and of itself, enough to make a difference.

An additional aspect of this discussion is the issue of relapse. Most studies on relapse focus on men, and the few that have included women neglected to present results by gender. It is argued that most studies, books, articles, and other resources implicitly assume that women relapse for the same reasons as men. There is, however, a small amount of research that indicates that the reasons that underlie relapse for women may differ from those factors associated with men's relapse. For example, marriage has been found to be protective for relapse in men, but increased the risk of relapse in women. Psychological factors are another key factor in relapse for women. Specifically, this refers to issues of sexual and physical abuse where women are more likely to have experienced sexual and physical abuse. This translates into significantly higher rates of

post-traumatic stress disorder. Thus, while common variables (such as length of abstinence over the last six months, lower visual spatial memory, lower new learning ability, and number of coping skills) are important, the consideration of existing differences is equally crucial (Kerr, 1997).

Psychopathy/Antisocial Personality

Clinical lore maintains that substance abusers with antisocial personality disorder (ASPD) are only minimally responsive to treatment, and have worse outcomes than non-ASPD individuals. A growing body of evidence suggests that this broad-based pessimism is unwarranted.

Research Findings/Evidence

Longabaugh et al. (1994) randomly assigned 31 ASPD and 118 non-ASPD alcohol abusers to 20 sessions of either cognitive-behavioral or relationship enhancement treatment. These individuals were then followed-up at one-month intervals for 18 months from treatment initiation; collaterals were also interviewed. Results were as follows: When average drinks/day (i.e., overall amount consumed) was measured, ASPD alcoholics did not differ significantly from non-ASPD alcoholics. ASPDs had significantly more abstinent days than non-ASPDs during months 13 to 18. When drinking intensity was measured (i.e., average drinks consumed on a drinking day) the ASPDs who had received cognitive-behavioral treatment had the lowest of all patients studied; the ASPDs who received relationship enhancement treatment had the highest.

Cacciola, Alterman, Rutherford and Snider (1995) assessed 224 male alcohol and/or cocaine abusers about to commence treatment in either an outpatient or an inpatient facility. Of this group, 77 received a diagnosis of ASPD. Treatment included coping skills training, relapse prevention techniques and 12-step attendance. At seven month follow-up, both ASPD and non-ASPD subjects had improved significantly in a number of problem areas—medical, employment, drug and alcohol use, legal and psychiatric. In the domain of family and social problems, ASPD subjects had improved more than non-ASPDs. It should also be noted that, while ASPDs functioning in the legal domain did improve, their legal problems were worse than non-ASPDs at baseline—and continued to be worse at follow-up.

Brooner, Kidorf, King and Stoller (1998) tracked 40 methadone-maintained patients with ASPD, with the goal of testing an intensive behavioral intervention against a less structured behavioral program. Although the lack of a control group of non-ASPD

subjects hampers their findings, the authors report that, 13 weeks into treatment, subjects in both conditions had high rates (in the 58 to 72% range) of negative urine for opiods and cocaine.

In an article assessing various criteria for diagnosing ASPD, Carroll, Ball and Rounsaville (1993) reported that in 94 cocaine abusers reached one year following treatment, when baseline abuse-severity was controlled for, the presence or absence of a Diagnostic Statistical Manual IIIR (DSM-IIIR) antisocial diagnosis was not significantly related to outcome.

In addition to studies specifically focusing on ASPD, there are also studies in the literature in which ASPD is assessed as one of many variables possibly predictive of treatment outcome. McKay et al. (1997) is an example of a study in which an ASPD diagnosis was not associated with (good or bad) post-treatment drug use outcomes.

There are a few studies that are frequently cited in support of the contention that ASPD patients do less well. Rounsaville, Dolinsky, Babor and Meyer (1987) did a one-year follow-up of 266 alcoholics who had received an unspecified dose of treatment during inpatient stays at three different treatment facilities. They found that an ASPD diagnosis was significantly associated with several negative outcomes including withdrawal symptoms and intensity of drinking. The authors did not control for the baseline severity of the subjects' drinking, and do not delineate the content and/or intensity of the treatment that the subjects received.

Woody, McLellan, Luborsky and O'Brien (1985) randomly assigned 110 male methadone-maintained opiate addicts to either paraprofessional drug counseling or to this counseling plus manual-guided psychotherapy. Outcomes at seven month follow-up were examined in terms of four diagnostic groups: those with opiate dependence alone; those with opiate dependence plus depression; those with opiate dependence plus antisocial personality disorder; and those with opiate dependence plus both depression and antisocial personality disorder. Across treatment conditions, patients with antisocial personality disorder improved only on ratings of drug use, while patients with comorbid ASPD and depression improved in a variety of domains (psychiatric, employment, legal), but did less well than patients in the other two (non-ASPD) groups. The authors theorize that the sociopath's inability to form meaningful relationships hampered their ability to benefit from psychotherapy. In critiquing this study, Brooner et al. (1998) argue that indeed the evidence does show that treatment predicated on a therapist-client relationship is the wrong approach with the ASPD population. They also argue that this study does not demonstrate a generalizable lack of treatment responsivity, but merely suggests that individual psychotherapy is not an efficacious treatment approach with this population.

Psychopathy versus antisocial personality disorder and depression

In attempting to make sense of some of the mixed findings above, some authors (Cacciola, et al., 1995) have suggested that the concept of a psychopathic personality, characterized by traits such as lack of empathy and remorse, may offer a construct that, in fact, measures a less-treatment responsive group than the ASPD population (as defined by behaviorally based DSM IIIR criteria). Alterman et al. (1998) attempted to assess the predictive validity of four different variables: score on the revised Psychopathy Checklist (a well-established psychopathy measure); score on the socialization scale of the California Psychological Inventory; number of child conduct disorder behaviors; and number of adult antisocial behaviors. Subjects were 193 methadone maintained males; "treatment" consisted of meetings with a counselor, at first weekly and then less frequently. All four variables were significantly negatively correlated with treatment completion, although the correlations themselves were quite small. None of the predictor variables were significantly correlated with positive opiate toxicologies, or with change in any of the domains measured by the ASI. While psychopathy (as measured by the Psychopathy Check-List – Revised) was the most powerful predictor of treatment non-completion, again, the findings (and the treatment offered) were modest.

Antisocial personality disorder and depression

The Woody et al. (1985) study described above suggests that individuals with both ASPD and depression may represent a particularly treatment receptive subset of the ASPD population. In an analysis of 29 hospitalized male alcoholics with antisocial personality disorder (a subset of the subjects of a double-blind, placebo controlled study of nortriptyline and bromocriptine with alcoholics) Penick et al. (1996) report that, among patients with both ASPD and depression, pharmacological treatment with an antidepressant was associated with greater abstinence over the six-month course of the trial. While the authors deem these findings preliminary, the results lend weight to the argument that an ASPD diagnosis by no means precludes treatment.

Co-occurring disorders

Treatment programs specifically serving people with co-occurring severe mental illness and substance abuse disorders have not been studied systematically nor evaluated rigorously. Further, the intervention strategies used are often not specifically defined. Jerrell and Ridgely (1995) examined the rationale for and relative effectiveness of three intervention models for treating people with severe mental illness and substance abuse disorders: Twelve-step recovery, behavioral skills training, and intensive case management. Using clinical trial methods, 132 dually diagnosed clients were assigned to three service approaches. Changes in client psychosocial outcomes, and psychiatric and substance abuse symptomology were tracked over a 24-month period. Differential effectiveness was evident, with clients in the behavioral skills group demonstrating the most positive and significant differences in psychosocial functioning and symptomology, compared with the 12-step recovery approach. However, the case management intervention also resulted in several positive and important differences compared with the

12-step recovery approach. Significant changes were also found over time, not only at six months but increasingly positive changes in psychosocial functioning at 12 and 18 months as well.

Other Treatment Issues

Treatment Duration

A popular view is that treatment necessarily involves lengthy and intensive treatment programs. However, research on brief interventions focusing on advice and motivational enhancement for reducing drinking indicates that brief sessions can be as effective as more intensive interventions. While research on brief interventions focusing on the goal of abstinence have been mixed, some studies involving the goal of moderate drinking have reported success (Larimer et al., 1998).

The Project MATCH Treatment Group (1997) compared a four-session version of individually administered, motivational enhancement therapy with 12 weekly sessions of cognitive-behavioral skills training or 12-step facilitation therapy (individual counseling designed to increase utilization of AA and understanding of 12-step philosophy) in the treatment of alcohol dependence. The goal of treatment was abstinence in all of the cases. Substantial improvements were shown among participants in all conditions with no significant differences between the groups at three, six, or 12 month follow-up. In contrast to the results of earlier studies, participants with greater levels of dependence showed no difference in improvement rates, regardless of condition (i.e., brief motivational intervention versus more extended counseling).

A major study concerning reducing harmful levels of drinking was conducted under the auspices of WHO (Babor et al., 1994). Using 10 therapeutic communities throughout the world, subjects (heavy, nondependent drinkers) were randomly assigned to one of three conditions: no treatment, minimal advice of five minutes in duration, or brief counseling of 20 minutes in duration supplemented by a manual concerning reduced drinking. It was found that men receiving advice about quitting drinking or reducing level of consumption showed higher reductions in drinking than did subjects in the no treatment condition. Results were not associated with differences in duration or intensity of advice. No differences were found in drinking rates between clients receiving advice and those receiving standard outpatient treatment (Babor et al., 1994).

Therapist Effects

The drug and alcohol abuse counselor has also been shown to have an effect on the engagement and participation of the client in treatment and post-treatment outcome. McLellan, Woody et al. (1988) found that methadone-maintained patients who were randomly assigned to a no-counseling condition failed to reduce drug use (68% of patients) and 34% of these patients required at least one episode of emergency medical care. In contrast, those randomly assigned to the counseling group did not require

emergency medical care, 41% showed sustained elimination of cocaine use during the six months of the trial, and 63% showed sustained elimination of opiate use.

The style of the therapist is also considered to be an important factor in the client-counselor interaction. The approach taken by the therapist can be a powerful determinant of client resistance or change. According to Bell and Rollnick (1996), a number of studies exist which demonstrated that the level of client resistance was directly related to the level of confrontation from the therapist. The style of the counselor was also a predictor of client outcome, with the greater the level of confrontation, the more likely the client was drinking one year later (Bell and Rollnick, 1996).

Motivational Interviewing

Motivational interviewing is a method of helping clients recognize and act on present or potential problems that was developed using findings from the field of experimental social psychology. It is a counseling approach that is client-centered and directive. It is "designed to increase problem recognition and the probability of treatment entry, continuation, and compliance" (Miller, 1983).

Motivational interviewing aims to assist the client in the decision-making process of behavior change and to strengthen his/her commitment for change. The therapist works with the client to explore and resolve ambivalence about his/her problem behavior and the possibility of behavior change because ambivalence is the primary obstacle to overcome in initiating behavior change.

Motivational interviewing can be described as combining an interpersonal style that is warm, empathetic, and eliciting, with a set of strategies and techniques used toward achieving specific goals. While motivational interviewing is a combination of style and techniques, the emphasis is on the therapist's style of interacting with the client.

Elements of a motivational interview include providing objective assessment feedback; emphasizing client responsibility; providing advice; offering a menu of treatment alternatives; showing empathy by using reflective listening; and, supporting self-efficacy.

Motivational interviewing can be delivered by psychologists, substance abuse counselors, physicians, nurses, and social workers. It has been applied to a variety of problems including drinking, smoking, heroin use, cocaine dependence, HIV risk behavior, sexual offending, diabetes, pain management, and cardiovascular rehabilitation.

Summary

Over the past two decades a range of well-controlled research studies have emerged demonstrating specific types of correctional interventions are associated with positive treatment outcomes such as reduction of substance abuse and recidivism. This discussion of effective substance abuse treatment has highlighted the fact that there is no single technique or program that is effective in treating all substance abusers. Given the multiple need areas of offender populations, no single approach can be viewed as effective on its own.

Offenders, however, do respond positively to the types of effective treatment techniques identified in the general research literature, provided that the services simultaneously target criminal behavior and substance abuse. In general, programs that are based on the principles of risk , need, and responsivity, and those that promote a positive client-therapist relationship while adhering to a structured format are associated with decreased relapse rates. In addition, cognitive-behavioral interventions appear to be more effective with moderate to higher risk substance abusing offenders.

An additional facet of this discussion has been the issue of special populations. Specifically, the unique needs of female offenders and offenders with co-existing mental illness has served to highlight the necessity of recognizing multiple need areas of offender populations.

Overall, the goal of treatment is to effect client-treatment matching in which assessment of both client characteristics and treatment variables are key areas of focus.

Endnotes

[1] Several correctional researchers have presented the he Characteristics of Effective Correctional Treatment (CECT) over the past 10 years. The points selected for the literature review represent a consistent and comprehensive overview of the CECT.

[2] This does not include indirect effects, such as offenders committing property offenses to secure funds to pay for drug habits.

[3] We would like to acknowledge the contribution of the literature review written by Dr. Mark Sobell, Greg Graves, and Bart Millson "Substance Abuse Treatment Modalities" (1996, Correctional Service Canada).

[4] While each technique has been discussed in isolation, it should be noted that effective approaches are multi-modal in nature.

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